

Source of Apollo Fire May Soon Be Located

L. A. TIMES
FEB 20 1967
BY RUDY ABRAMSON
Times Staff Writer

WASHINGTON — The United States will start preparations this week to recover from the first disaster of its manned space flight program and to put project Apollo back on a timetable leading to a manned landing on the moon before 1970.

By the end of the week, the National Aeronautics and Space Administration expects to have in hand an accurate picture of where an uncontrollable spacecraft fire started Jan. 27, killing the Apollo 1 astronauts during a training exercise. It also expects a second-by-second account of how the fire spread through the Apollo cabin.

Though these findings will not permit a blue ribbon investigating board to say precisely what ignited the blaze or why, they will allow space planners to begin more specific plans on modification of the spacecraft, changes in training procedures, and revision of the flight schedule leading to the landing on the moon.

The preliminary findings probably will not be made public until next week, at least not until they have been discussed with NASA administrator James E. Webb and leaders of congressional space committees.

Changes Considered

At present, changes in the spacecraft atmosphere, modification of its escape hatch, installation of fire or smoke detection and extinguishing systems, and revision of training procedures are all being considered along with several other possible changes before resuming manned space flights.

If the place where the fierce, oxygen-fed fire started can be pinpointed this week, experts will be well on their way toward finding what caused the ignition. However, Dr. Robert C. Seamans, deputy NASA administrator,

concedes it may be impossible to ever say unequivocally what triggered the blaze.

For example, even spontaneous combustion of some material not supposed to be in the spacecraft is still being considered as a possible source of the fire, he said.

Twenty-one technical panels assigned to the board of inquiry are still going through the lengthy list of tasks given them. High-fidelity recordings taken from the spacecraft after the fire broke out are being analyzed for possible clues.

Roar of Blaze

These recordings may help to follow the progress of the fire through the spacecraft because the roar of the blaze itself can be heard on the tapes for a short period.

Charred flight books, which the crew members were using to guide them through the lengthy test, are being analyzed by the Federal Bureau of Investigation to see whether one of the crewmen might have scribbled something before he died to shed light on the cause of the accident.

Investigators are also trying to find whether astronaut Virgil I. (Gus) Grissom, commander of the crew, tried to open a valve which would have permitted the pure oxygen, which fed the fire, to escape from the pressurized cabin.

If there was a mechanical malfunction of the system, it can probably be identified by the board of inquiry, Dr. Seamans said.

U.K. may win £8m. Indian order for jets

London Financial Times. 2-15-67

BY OUR AIR CORRESPONDENT

THE BRITISH Aircraft Corporation now has strong hopes of winning a contract worth about £8m. for six One-Eleven jets from the Indian Airlines Corporation. A decision by the airline is likely to be announced soon.

A team from the BAC has been negotiating for the order for some

time, in the face of competition from the U.S. Boeing and Douglas companies. It is understood that currently the Indian operator prefers the One-Eleven, and that the U.K. has been able to offer exceptionally good credit terms.

The current order book for One-Elevens stands at 124 aircraft, with options on another 35.

AIR PICTORIAL 2-67

Argentine news

The first eight Douglas A-4B Skyhawks for the Argentine Air Force arrived at Tucumán on 29th October on their way to Villa Mercedes, the home of V Air Brigade, where they will be based. Serials start at C-201 and the number of aircraft involved has been cut from fifty to twenty-five, although the U.S.A. has promised another twenty-five for sale in 1967. The Argentine A.F. has also received two ex-U.S.A.F. Douglas C-47s and, according to recent reports, is to acquire two DC-6s and eighteen light helicopters. Two DINFIA Guarani IIs (T-111 and T-124) are now in service with I Air Brigade at El Palomar, while two more have been

ordered for the Instituto Geográfico Militar, an Army air-mapping organisation.

Argentina's *Aviación Naval*, which recently put three ex-R.A.F. P2V-5 Neptunes up for sale, has been taking delivery of some newer Neptunes, probably P2V-7s, from the U.S.A. The forty-five North American T-28Es purchased from France will be based at Punta de Indio Naval Air Base. A few F4U-5 Corsairs are still in service with the 2nd Attack *Escadrille*, one appearing at Rio Gallegos soon after the unscheduled flight (pilot at gunpoint) of the Aerolíneas DC-4 LV-AGG "Teniente Benjamin Matienzo" (c/n. 10333) to the Falkland Islands on 28th September; the DC-4 was flown back from the Falklands on 8th October, being escorted to Rio Gallegos by Argentine Navy Albatross 4-BS-1.



Views On Business

Survey Of EVENING OUTLOOK Fund Buying

FEB 17 1967

By ED MOOSBRUGGER

Evening Outlook Business Editor

McDonnell Co., Douglas Aircraft Co.'s proposed merger partner, was one of the darlings of the mutual funds during the fourth quarter of 1966, a report by E.F. Hutton & Co. shows.

McDonnell was purchased by five funds out of 48 surveyed during the quarter, ranking it second behind General Dynamics (six buyers) in "buy" activity. The five funds bought a total of 294,200 shares of McDonnell.

Mainichi Daily News 2-8-67

Flying Tigers Line To Propose Trans-Pacific All-Cargo Service

Flying Tigers Line, the world's largest all-cargo air carrier, will propose the introduction of a trans-Pacific all-cargo service with the first fleet of Douglas DC8-63F "jumbo jets" ever to be operated—between its domestic U.S. terminals and Japanese and other major Asian

markets.

Officials told a press conference at Hotel Okura that this primary proposal will be presented to Civil Aeronautics

Board examiner Robert L. Parkes at hearings on the case in Honolulu, starting February 15.

California's Share of U.S. Defense Dollar Shrinks

L. A. TIMES

FEB 19 1967

BY ROBERT E. NICHOLS, Times Financial Editor

CALIFORNIA still commands an impressive lead over other states as the nation's biggest supplier of military goods, services and ideas. But a new Department of Defense summary of prime contract awards discloses that although the dollar figure is higher, the state's share of the U.S. total is slipping.

In fact, California's share of Pentagon business has dipped to the lowest level since 1953—to 18.3% of the U.S. total compared with 22.1% a year earlier. Its share was 21.0% in fiscal 1964, and 23.1% in 1963.

The armed services channeled \$5,813,078,000 in prime contracts of \$10,000 or more to California's factories and laboratories during the 12 months ended last June. This was \$659,439,000 more than in fiscal 1965, or a 12.8% gain. It also was more than double the net value of contracts going to the other major defense production areas: New York, Texas, Connecticut, Massachusetts and Pennsylvania.

Nonetheless, study of the data from the Pentagon's Directorate for Statistical Services shows that California's gain in military business was only one third the national gain.

The national total shot up 36.3%—almost \$8.5 billion—during fiscal 1966 for a reported total of \$31 billion. The volume of new contracts since last June is still climbing. Another \$10 billion was reported for the July-through-September quarter, almost \$4 billion more than in the comparable period of 1965.

These figures are only rough indications of the money the Pentagon is allocating for procurement inside the United States. They specifically omit projects that are so highly classified that neither the size of contract nor location of the prime contractor can be indicated. And they don't include contracts awarded overseas.

By cross-checking other Defense Department reports, the discrepancy would seem to range between \$5 billion and \$9 billion.

Attempts at measuring shifts in military spending are notoriously tricky. For one thing, prime contract awards give little or no indication of subcontracting activity, which during the current peak demand has spread across the country.

Major California defense firms like Lockheed, North American or Northrop call upon the skills and

facilities of numerous other firms, both within California and outside.

Conversely, big contractors in Texas, New York and elsewhere find it either desirable or unavoidable to call upon California-based companies for assistance.

But there are no figures measuring this interstate flow.

Even so, the new contract summaries make it fairly clear that California has taken some lumps as a result of the changing nature of military requirements and perhaps because of steady pressure from

congressional delegations from other states.

The demands of a conventional or "brush-fire" war such as the one we're fighting in Vietnam place greater priority on mundane materiel than on the Big Bang variety that many if not most of California's industries have been geared for.

California's electronic and aerospace complexes are contributing some of the weaponry being chewed up in the hills and jungles of Vietnam. But much of the military buying last year involved things like "textiles, clothing & equipment" or "non-combat vehicles" or "containers & handling equipment."

As for the regional rivalry, California's paramount position in both military and space production—and research and development—for years has been a target for political leaders in New York, Texas, Illinois and Pennsylvania. And these states clearly have had modest success in wooing at least some of the prime awards away from the Pacific Coast.

One interesting trend: Texas' share of last year's awards was 7.2% of the U.S. total. It had been 6.2% in 1965, 5.3% in 1964 and 4.8% in 1963.

Employment Set Records

Meanwhile, California industries seem less concerned about the erosion of the state's chunk of the

business than finding enough skilled employees to handle the business they have.

The state's Division of Labor Statistics & Research has just released its 1966 summary of employment trends in industry.

And both the total of all non-farm wage and salary workers and the number employed in aerospace industries set new records. Of some 6 million workers covered by the report, 544,600 are employed in forms of aerospace production—aircraft, electronics, ordnance, or instruments. Aerospace jobs increased by 62,300 workers in 1966.

Federal civilian employees working in defense agencies totaled 155,800, up by 16,100 jobs during the year.

And although the Division of Labor Statistics doesn't tally military population, the state had at least 347,000 members of the armed services in residence last July.

That comes out to 700,400 civilians directly involved in defense activity plus 347,000 uniformed personnel, or a minimum of 1,047,000 defense-related wage earners.

INCOME MARK SET BY NORTHWEST AIR

N. Y. TIMES

Carrier's Revenues Also

Reach Record in Year

FEB 18 1967

Northwest Airlines reported yesterday a 1966 net profit of \$3,135,923, or \$5.81 a share, compared with \$45,694,024, or \$4.99 a share, in 1965.

The company's operating revenues reached \$311,318,511, an increase of 18.4 per cent above 1965, when revenues amounted to \$262,998,139.

Donald W. Nyrop, president, in issuing the report, noted that both revenues and earnings had set records last year in spite of the 42-day strike during July and August.

Operating expenses increased from \$177,150,933 in 1965 to \$210,664,032 in 1966.

The airline took delivery last year of 18 new jetliners costing \$110.5-million and the fleet expansion will continue this year, Mr. Nyrop said.

The company expects to take delivery this year of five long-range 707-320C Boeing fan jets and six smaller Boeing 727 fan jets.

L.A. Studies Jet Smog Controls

L.A. HERALD-EXAMINER

FEB 19 1967

County smog officials today were exploring the merits of a new fuel additive which assertedly shows promise in reducing smoky emissions from jet planes in takeoffs and landings.

Louis J. Fuller, county air pollution control officer, said Ethyl Corp. had developed the additive, known as "C-12," which is designed to improve combustion efficiency.

He said the product does not appear to offer a solution to exhaust problems caused by cars and power plants, but "it indicates promise in reducing visible emissions from jet engines, both stationary and airborne."